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BENGAL DISTRICT GAZETTEERS.

BALASORE.

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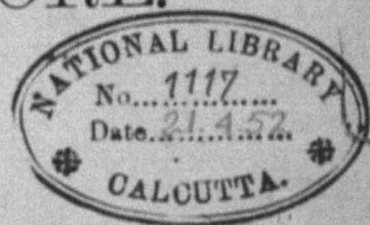
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BENGAL DISTRICT GAZETTEERS

BALASORE.



BY
L. S. S. O'MALLEY,
INDIAN CIVIL SERVICE



ST.
RHS.

PREFACE.

I desire to acknowledge the very great assistance I have derived in compiling this volume from the Report on the Settlement of Balasore, by Mr. D. H. Kingsford, I.C.S., which is published as an Appendix to the Final Report on the Survey and Settlement of the Province of Orissa (1890-1900), by Mr. S. L. Maddox, I.C.S.

L. S. S. O'M.

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GAZETTEER

OF THE

BALASORE DISTRICT.

CHAPTER I.

PHYSICAL ASPECTS.

BALASORE, the northern district of the Orissa Commissionership or Division, is situated between $20^{\circ} 44'$ and $21^{\circ} 57'$ north latitude, and between $86^{\circ} 16'$ and $87^{\circ} 29'$ east longitude. It contains an area, according to the latest survey, of 2,085 square miles, and a population, as ascertained by the census of 1901, of 1,071,197 souls. The principal town, which is also the administrative headquarters of the district, is Balasore, situated on the western bank of Burābalang river. The name is said to be a corruption of Banaswar, and to be derived from a temple in the town dedicated to Mahādeo Banaswar, i.e., Siva, the Lord of the Forest, a title which points to the time when the populous town of Balasore and the surrounding country were covered by virgin forest.

GENERAL
DESCRIP-
TION.

The district is bounded on the north by the district of Midnapore and the Tributary State of Mayūrbhanj; on the east by the Bay of Bengal; on the south by the district of Cuttack, from which it is separated by the river Baitarani; and on the west by the wooded hills of Keonjhar, Mayūrbhanj and Nilgiri.

Boun-
daries

It consists of a long strip of alluvial land between the hills and the sea, somewhat like an hour-glass in shape, very narrow in the centre, but growing broader towards the north and south. This tract varies in breadth from about 30 miles at the north-eastern extremity to 10 miles at the narrowest or central portion and 40 miles in the south. The district, thus hemmed in by a surf-beaten coast on one side and a barrier of hills on the other, comprises three belts of country extending from north to south in lines roughly parallel to the coast and rising slowly as they

recede from it. The first is a narrow maritime strip of land, in many places impregnated with salt and unfit for cultivation, which has been formed by the silt-laden rivers debouching from the hills and the sand-burdened currents of the Bay. The second is the delta proper, an alluvial plain teeming with inhabitants and covered with great stretches of rice, which constitutes the greater part of the district. The third belt consists of the western border-land, running along the foot of the hills and bordering on the Garhjat, an undulating tract which gradually ascends into the wooded glens and hills of the Tributary States.

Natural
divisions.

Balasore is thus naturally divided into three well-defined tracts—the salt tract along the coast, the arable tract or rice country, and the submontane tract or jungle land. These three tracts appear as if they had been divided off artificially from each other by the Coast Canal, Trunk Road and railway line respectively.

The salt
tract.

The salt tract runs the whole way down the coast, and forms a narrow strip, from 2 to 6 miles broad, traversed by sluggish brackish streams creeping along between banks of black mud. Towards the beach this desolate region rises into sandy ridges, from 50 to 80 feet high, sloping inland and covered with a growth of scrubby vegetation seldom or never rising above the height of a man; on the verge of the ocean are sandhills clothed with creepers and wild convolvulus, on which deer and antelope love to feed. Further inland, the plain spreads out into prairies of coarse long grass and scrub jungle, throughout which there is scarcely a village, but only patches of rice cultivation and sparse groups of houses on the higher ridges, enclosed by palm, cocoa-nut and betel-nut groves. The low lands near these ridges are utilized for grazing purposes, but here and there certain portions have been brought under the plough. The western boundary is fringed with long lines of villages, from which every morning herds of cattle are driven to its saliferous plains to graze. This tract is purely alluvial; towards the coast, the soil has a distinctly saline taste, and salt manufacture used to be carried on to a considerable extent.

The arable tract lies beyond the salt lands, and includes much the greater part of the district. It is a long dead level of rice fields, with a soil light in colour, friable, and apt to split up into small cubes. A noticeable feature of this region is the *pāts*, literally the "cups" or depressed lands near the river banks. They produce the finest crops, and are probably the sites of marshes that have partially silted up by the yearly overflow of the rivers. The arable tract is sparsely wooded except round the villages, which

are encircled by fine mango, *pipal*, banyan, and tamarind trees, and intersected with green shady lanes of bamboo. A few palmyras, date palms and screw pines also dot the expanse, or run in lines between the fields.

The submontane tract is an undulating country with a red soil, much broken up into ravines along the foot of the hills. Masses of laterite, buried in hard ferruginous clay, crop up as rocks or slabs. At Kopāri about 2 square miles are almost paved with such slabs, dark red in colour, perfectly flat, and highly polished. Here the mountain torrents have scooped out for themselves picturesque ravines clothed with a dense, fresh verdure of prickly thorns, stunted gnarled shrubs, and here and there a noble forest tree. Large tracts are covered with *sal* jungle, which nowhere, however, attains to any great height. Near the hills there are patches of cultivated land, and the soil is often of great fertility on account of the rich vegetable matter brought down by the mountain torrents. The submontane tract.

The district is watered by six distinct river systems, viz., proceeding from north to south, those of the Subarnarekhā, Pāñch-RIVER SYSTEM.para, Burābalang, Jamkā, Kānsbāns and Baitarani. During the hot weather the upper channels of these rivers dwindle to insignificant streams dotted here and there with stagnant pools; but in the rainy season they bring down an enormous mass of water from the hills in which they take their rise. They drain a large area, and the rapidity of the current acquired among the mountains sweeps down a vast quantity of silt in suspension. As soon, however, as the river leaves the broken hilly region for the level delta, its current is checked, and being unable to carry down the sand with which it is charged, it deposits it in its bed. By degrees, therefore, the channel becomes shallower, the bed is raised, and the river flows at a higher level than the surrounding country. The rivers and their various channels consequently become less and less able to carry off the water-supply to the sea, and frequently prove inadequate to furnish an outlet for the volume of water with which they are charged during the rainy season. The result is that, though in the cold and hot weather they are small streams winding through long expanses of sand, in the rains they are formidable torrents which often overflow their banks and flood the country far and wide.

The following is a brief description of each of these principal rivers with their most important tributaries and offshoots.

The Subarnarekhā takes its rise 10 miles south-west of Ranchi in the Chotā Nāgpur plateau. It flows towards the north-east, leaving the main plateau in a picturesque waterfall, and then The Subarnarekhā.

forms the boundary with Hazāribagh, its course being eastwards to the trijunction point with the Mānbhūm district. From this point the river bends southwards into Singhbhūm, then passes into the State of Mayūrbhanj, and afterwards enters Midnapore from the north-west. It traverses the jungle in the western part of this district till it reaches Balasore, through which it flows for 60 miles in a tortuous southern course, with great windings east and west, until it finally falls into the Bay of Bengal, in $21^{\circ} 34' N.$ and $87^{\circ} 21' E.$, after a course of 296 miles, during which it drains an area of 11,300 square miles. The river banks are high and steep on the outer curve of the bends, against which the water cuts, and flat or sloping on the inner. It has no tributaries within the district, except a small stream, the Guchidā, which joins it at Bhogrāi; and although studded by islands as old as our oldest maps, it has long ceased any operations of diluvion or alluvion on a large scale. The country along the banks is cultivated to within a few miles of the sea, where it enters the saline tract. The Subarnarekhā is nowhere fordable within the district during the rainy months, and it is liable to heavy floods, which inundate the surrounding country on either bank for a distance of about 4 miles, and have been known to penetrate 12 miles inland.

This river carried the early European trade in the Province from and to the port of Pipili, which was occupied by the Portuguese at the end of the 16th century. The silting up of the mouth of the Subarnarekhā during the next century led to the downfall of the port, of which no vestige now remains. The river is still, however, navigable by country craft as far as Kalikāpur about 16 miles from its mouth, up to which point it is tidal; 25 miles further up it is spanned by the railway bridge and the Orissa Trunk Road at Rājghāt. It communicates with the Coast Canal at Jāmkundā lock, and is largely used by country boats; small vessels can make their way up to the boundary of the district, and during the rains far into Mayūrbhanj. The name Subarnarekhā, which means a streak of gold, is said to be derived from the fertility of the land on either bank. Others, however, trace the origin of the name to the particles of gold occasionally found in its sandy bed.

The
Pāncpāra

The intermediate country, on the south of the Subarnarekhā and north of the Burābalang, forms an elongated drainage basin running south-east from the trijunction of Midnapore, Dhalbhūm and Mayūrbhanj. It is watered by a number of small streams, of which the principal are the Jamirā, Bāns and Bhairingi, which unite, bifurcate and reunite, until the great river which they eventually form enters the sea under the name of the

Pānchpāra. This name, which means the five villages, was given to the river because there were once five villages at the spot where it enters the sea. The tide runs up only 10 miles; and although the interlacings of these streams constantly spread out into shallow swamps, one of them, the Bāns, is deep enough at certain parts of its course for the passage of boats of 100 maunds burden all the year round.

South of this network of rivers is the Burābalang, which rises among the Mayūrbhanj hills. After receiving two small tributaries, the Gangāhar and Sunai, it winds its way into the sea near Chandipur after a course of 35 miles through the district. In the upper parts of its course the banks are sandy, steep and cultivated; in the lower part they are of firm mud, covered to high-water mark with black ooze and surrounded by jungle or open grassy plains. It is tidal, and brigs, sloops and small steamers can navigate its tortuous course as far as the town of Balasore, but the sand-bar across the mouth of the river renders the entrance difficult. It is liable to floods, but the area exposed to inundation, which lies to the north and north-west of the town, is not large. The name Burābalang, which means literally the Old Twister, has been given to this river because of the extraordinary way in which its course winds and bends; thus the sea is 7 miles from Balasore as the crow flies, but to reach the coast by this river entails a journey of about 18 miles. The Burā-balang.

On the south of the Burābalang, a second network of rivers, known as the Jamkā, find their way down from the Nilgiri Hills, and enter the sea by many channels along the coast of the Dasmalang *pargana*. There is little or no navigation, as their mouths have been closed up by the construction of the Coast Canal and are very difficult to enter; there is no maritime traffic on their banks; and the most important of these channels, the Jamkā, has a sluice built about a mile from its mouth. The Jamkā.

The Kānsbāns is so called from a jungle of *kāns* grass and bamboos, amid which it rises in Ambahatā in the Tributary States. It runs in a south-easterly direction, at first almost parallel with the Nilgiri Hills, and receives from them a number of nameless drainage streams on its northern bank. After passing under the triple bridge on the Trunk Road near Soro, it bifurcates at Bīrparā, the northern branch retaining its original name and flowing into the sea 30 miles from the point where it enters the district. It is navigable only a few miles up, but it is notorious for its sudden floods and for the wide extent of country which it submerges in the rainy season. Near its mouth is The Kāns-bāns.

Leichanpur, once a frequented port, which was closed in 1888 owing to the silting up of the river.

The
Gamai.

The southern branch receives the name of Gamai, and falls into the sea 6 miles south of the Kānsbāns. Owing partly to the construction of the Coast Canal, this river has rapidly silted up, and the passage to the sea is almost closed. Three miles from its mouth is situated the old port of Churāman, once an important centre of the export trade, but now an insignificant village. Like the Kānsbāns, the Gamai is liable to heavy floods, but a great part of its flood water runs south-westwards along the old Churāman or Ricketts canal into the Matāi, which drains the country east of Bhadrakh and has a course of 40 miles.

The
Baitarani.

The Baitarani rises among the hills in the north-west of the Keonjhar State and enters this district near the village of Balipur; after flowing in a winding easterly course across the delta, where it marks the boundary line between Cuttack and Balasore, it passes by Chāndbāli and joins its waters with the Brahmani. It then joins the Dhāmra 5 miles from its mouth, after a course of about 45 miles along the southern boundary of the district, and the united stream finds its way into the sea under the name of the Dhāmra river. It is navigable as far as Olokh, 15 miles from its mouth; but beyond this point it is not affected by the tide and is fordable during the hot season. The river is subject annually to heavy floods, which travel inland to an average distance of 4 miles, and occasionally as far as 12 miles, and cause considerable damage to the standing crops. Down to Akshuāpadā the left bank is protected by an embankment, but below this the countryside is exposed to inundation, while the embankment on the right or Cuttack side prevents the discharge of water in that direction. A large weir has been constructed across the stream at Akshuāpadā in order to dam the water during the dry season and supply the portion of the High Level Canal between that place and Bhadrakh.

This river is identified by the Brahmans as the Styx of Hindu mythology, but the name is possibly a corruption of Avitarani, meaning "difficult to cross." Legend relates that Rāma, when marching to Ceylon to rescue his wife Sita from the ten-headed demon Ravana, halted on its banks on the borders of Keonjhar; and in commemoration of this event large numbers of people visit the river every January. The Baitarani receives two important tributaries in Balasore, the Salandi and the Matāi.

The
Salandi.

The Salandi, a corruption of Sālnadi or the Sāl river, takes its name from the *sāl* (*Shorea robusta*) forests which it traverses. It rises on the southern slope of the Meghasani mountain (literally

the seat of clouds) in Mayūrbhanj, and throughout its upper course is a black-water river with high banks and a bottom of muddy sand. In January it scarcely anywhere exceeds 3 feet in depth. Luxuriant vegetation clothes its banks, which in places rise almost to the dignity of cliffs, and for miles the river runs through continuous groves of mangoes, palms, and bamboos. It forms no islands or lakes, and has no tide, but it is navigable for country boats as high as 6 miles from its junction with the Baitarani. Its lower course breaks up into a network of channels, which are interlaced with those of the Matāi. □

The Matāi brings down the drainage of the country between the Kānsbāns and the Sālandī, and after a tortuous course over a muddy bed and between densely wooded banks enters the Dhāmra river near its mouth. This river attains a considerable volume at Charbātā, where it is joined by the Coast Canal; it runs thence into the Dhāmra, which connects it with the port of Chāndbali. It is tidal as far as Ruknādeipūr, 8 miles east of Bhadrakh, and is navigable up to that point by country boats.

Among the minor rivers of the district may be mentioned the Hāskurā, Sārathā, Pāgā and Nembu rivers. The Hāskurā, literally the duck-swimming river, is a hill stream which rises in Mayūrbhanj, and flowing across the Trunk Road below Rājghāt, passes south over the Bastā-Baliāpāl road to Tappa Bulang, where it communicates through an inlet with the Coast Canal. The stream contains very little water during the hot weather, but has been known to cause considerable damage in the rains, when it carries off a large part of the flood of the Subarnarekhā. The Sārathā runs a parallel course a few miles to the south, and passing under the bridge on the Trunk Road at Bastā, runs into the sea at the mouth of the Pānchpārā; it is tidal as far as the Coast Canal 10 miles from the sea. The Pāgā is a small stream south of the Burābalang with a length of only 10 miles. The name is said to be a corruption of Paryāg, the old name of the village near which it rises. The Nembu or Kantiāchera rises in the Nilgiri Hills and runs a course of 15 miles in the district. The name is said to mean the lemon river, and to be derived from the lemon groves which formerly used to fringe its banks.

The district has a coast-line of 85 miles through which several great rivers make their way to the sea. In spite, however, of the existence of these estuaries and of the extent of its sea face, the district does not contain a single harbour capable of sheltering ships of any great size. In the words of Sir William Hunter,* "an

* Sir W. W. Hunter, Orissa, 1872.

eternal war goes on between the rivers and the sea, the former struggling to find vent for their columns of water and silt, the latter repelling them with its sand-laden currents." These forces counteract each other, and the sea deposits a bar outside the river mouth, while the river pushes out its delta to right and left inside. These rivers consequently silt up at the mouth, and, though they are generally of sufficient depth, each is blocked up by a bar of sand or mud, which prevents the entrance of large sea-going vessels except at high tide. Silt, the common enemy of waterways in Orissa, has been fatal to the prosperity of almost every port in the district.

In the year 1871 there were seven ports, Subarnarekhā, Sārathā, Chānuyā (Chhaunā), Balasore, Laichanpur, Churāman, and the Dhāmra, including Chāndbāli. Some of these ports were, however, very insignificant. Sārathā and Chānuyā were merely demarcated portions of the rivers known by those names, deep slimy nullahs on which it was most difficult to land owing to the soft muddy banks. Laichanpur, 23 miles south of Balasore, and Churāman, 6 miles further on, were also parts of two nullahs, the mouths of which were so nearly closed that to steer a small jolly boat into them and out to sea again required careful watching of the tides, while they were so completely concealed by a dense fringe of jungle that it was almost impossible to discover them from the sea. Churāman was, however, once considered the safest and most convenient port on the coast of Orissa, largely owing to the facilities afforded by the extraordinarily soft and yielding nature of the mud bottom of the river. The rice sloops penetrated as near the coast as high water would allow them to push their way, and the receding tide left the greater part of their hulls resting securely on a soft cushion of mud. It was a well-known fact on the coast that, should there be any doubt as to the possibility of weathering a dangerous storm, the safest plan was to run the ship straight into the bay of Churāman, where the thick, half-liquid mass of mud in solution counteracted the violence of the winds and waves.

Owing to the silting up of the river mouths, to the construction of the Coast Canal, which, while providing a new waterway, facilitated the process, and to the abandonment of the old salt manufacture, many of these ports have now ceased to exist, while the position of others has been changed. Thus Subarnarekhā is now represented by Batangā and Māndhātā on the Coast Canal and Bārabātā on the Guchidā river; Pānchpāra has taken the place of Sārathā; Churāman and Laichanpur have ceased to exist; a new port has been formed at Bāliapāl on the Matai river; and Chāndbāli has absorbed the trade of the old port of Dhāmra.

An account of the principal ports will be found in Chapter X, and it will be sufficient here to mention the three chief estuaries of the district, viz., those of the Subarnarekhā, Burābalang and Dhāmra.

A few centuries ago the Subarnarekhā was a noble estuary, The Subarnarekhā estuary. which was admirably suited for a harbour, and was consequently one of the first places to attract European mercantile enterprise. Here at the close of the 16th century the Portuguese established themselves at Pipli; that harbour was also the rendezvous of the Arakanese pirates; and later the English appear to have made a small settlement there. But the Subarnarekhā, though exceeding all the other rivers of the district in length, in the area of its catchment basin and in volume of discharge, was one of the first to silt up. By the beginning of the 18th century the silting up of its mouth had ruined Pipli, and the settlement was abandoned. The place lingered on as a ruined and silt-locked village, and was known as late as the early years of the 19th century, but no trace of it now remains. Once the most important port in the district, the Subarnarekhā is now least resorted to, though it is still frequented by fishing boats, which in fair weather sail out in little fleets of fifteen and twenty and travel down the coast as far as Puri. The sands stretching across its mouth are almost bare at low water, but beyond the bar there is a magnificent deep channel. It is, however, quite unsafe during the south-west monsoon, as it presents a dead lee shore with breakers right across the mouth.

Further down the coast is the estuary of the Burābalang or Balasore river. The Burābalang estuary. The port consists of the portion of the river fronting the town of Balasore, and is about three-quarters of a mile in length. It is situated about 7 miles from the coast in a direct line; but the river's course is so sinuous that the distance by water is 15 miles. From Balasore to the sea, the river itself has a fair depth of water; it is at its mouth that the difficulties of navigation begin or end, according as the vessel is bound outwards or inwards. From that point to the Balasore buoy, at a distance of 6 miles from the river's mouth, a narrow channel leads between sandbanks on both sides. The bar itself is half a mile long, and is a little over 2 miles from the river's mouth. In spring tides there is only a depth of one foot over it at low water, while high water gives a rise of 13 feet. A project for rendering the course of the river shorter and straighter, by cutting through the narrow necks of land that divide the different loops, was long under discussion; and it was hoped that this measure might add to the velocity of the tides, and enable the tidal scour to deepen the

channel over the bar. A cut was actually made about the year 1863, which succeeded in shortening the course of the river by about a mile, but the project was eventually abandoned.

The
Dhāmra
estuary.

The Dhāmra, which forms part of the boundary line between Balasore and Cuttack, is a fine estuary formed by the junction of the Brahmani and Baitarani rivers. There is a dangerous bar across the mouth, but the entrance has been greatly improved of late years, and at flood tide vessels drawing as much as 18 feet can pass in with safety. Within this, there is absolute protection from the monsoon, and the difficulties incident to vessels going up are simply those of river navigation. Chāndbāli, 20 miles from the mouth, is the most important port in Orissa.

Geology
BIOLOGY.

The district, shut in by the sea on one side and the hills on the other, is a deltaic alluvial flat formed by the large rivers which discharge their silt-laden waters into the sea. These fluviatile deposits are still going on, and the peculiar outline of the coast is entirely due to their advance. Blown sand drifts along all parts of the coast which face the south-east, and forms sand hills which cover a considerable area. They are generally bounded on each side, towards the land and towards the sea, by a low range, 60 to 80 feet high at the most, while other ranges more or less obliterated occur further inland. On the inner range there is almost always vegetation, and it seems to serve as a boundary for the barren land, which is prevented from being covered with grass by sand being continually blown upon it by high winds from the sea. There can be little doubt that each range of sand hills marks an old sea coast, and it seems probable that the sea has retired gradually and that the land has been raised, not continuously and uniformly, but at intervals and by interrupted movements. Further to the south the small, isolated, steep hills which rise from the plain to the north of Cuttack, taken in connection with the bosses and whale-like ridges which stud the surrounding country present all the features of an upraised archipelago; and lead to the belief that, at no very remote geological period, the sea of the western portion of the Bay of Bengal dashed against many a rugged cliff and rolled round clusters of islands which studded what is now the province of Orissa: indeed, a comparatively trifling depression of the country might reproduce the same phenomena. The evidences of the gradual rise of the land are numerous. It is probable that the cliff-like escarpment of the Nilgiri range and the isolated hills which dot the whole of Orissa have been brought to nearly their present form by denudation of an ancient date; while it seems evident from the laterite conglomerate which is

found that a more recent agency has tended to modify their shape. These are not evidence of a recent rise of land, but within the memory of man the tides came further up the rivers. This may be due to the raising of the delta by fluvial deposits, but it is stated by the natives that Balasore was once on the sea-shore, and it is doubtful if that can have been the case within historical times.

To the west of Balasore are the Nilgiri Hills, a group of fine rocky hills projecting to within 16 to 18 miles of the shores of the Bay of Bengal, which were known to old navigators as the Nelligreen Mountains. Commencing from the north of Orissa, this range of hills runs just outside the boundary of the Province for 50 to 60 miles. They have their northern limits on the banks of the Burābalang river about 12 miles W. N. W. from Balasore. From this point they run for about 16 miles due south in a broken range formed by three short detached hills, in a pass between which the village of Nilgiri nestles. Thence their escarpment continues for about 40 miles in a W. S. W. direction till the hills terminate at the valley of the Baitarani. They rise to a considerable height, Nilgiri hill being 1,786 feet above the sea, while many other summits are but little inferior in elevation. On the northern part of the range, these hills consist of excessively granitic rock; interfoliated with the gneiss there are found in one or two places bands of chloritic rock approaching serpentine in texture, which is quarried to a considerable extent by the natives. A few miles W. S. W. of Jugjuri, near the village of Paikpada, the rocks alter considerably, becoming a hard, tough, indistinctly crystallized hornblende rock, and further to the south-west quartz schist comes in, well foliated and sharply cleavable.

Between the hills and the sea the land is composed of alluvium. The more northern portion extending from the Subarnarekhā to the Burābalang belongs geographically to the same country as Midnapore, being almost a perfect plain to the east, while towards the west the surface is much more irregular and undulating, covered here and there with patches of low scrub jungle. The southern portion from Balasore for about 20 miles to the south-west is a region of older alluvium similar to much of that which occurs on the skirts of the delta of Lower Bengal. The newer alluvium occurs in the river valleys, while the older alluvium is distinguished by being more sandy, and the country covered by it is more undulating, the surface having been modified by denudation. It is very frequently accompanied by the nodular limestone known as *zankar*; but this is also, though in a somewhat less degree, pretty generally distributed in the more

recent alluvium, and in some places the nodules are very large. It is extremely difficult to separate the two varieties, as they frequently pass into each other by insensible gradation, and in some places laterite may be found beneath the soil in a perfectly flat country, in which everything induces the belief that the alluvium is recent. Laterite is found in a compact form along the base of the Nilgiri Hills, which it generally but not invariably skirts, and from the base of which it extends in many places for half a mile or a mile into the plains. But round Balasore a peculiar gravelly variety of this rock appears, forming a bed some 5 or 6 feet thick, at a short distance below the ground. This bed occurs in a tract of undulating alluvium, and is not compact as near the hills, but gravelly and sandy. It does not stretch far to the south, and it dies away also towards the hills. Further to the south it occasionally recurs, generally in the dry gravelly soils of the older alluvium, but it is sometimes also found in alluvium quite indistinguishable from the recent delta deposits.*

Along the coast as far north as the Burābalang river are large grassy plains with occasional sparse patches of cultivation and low jungle on the sand ridges and near the tidal streams. North of the Burābalang, and specially round the mouth of the Hāskurā and Subarnarekhā, are numerous tidal creeks fringed with heavy jungle. The banks of these sluggish rivers and creeks, which wind through the swampy low-lying country near the sea, exhibit the vegetation of a mangrove forest. Where sand dunes intervene between the sea and the cultivated land behind, a littoral vegetation uncommon in Bengal is met with, which includes *Spinifex*, *Hydrophyllar*, *Geniospermum prostratum* and similar species. These sand hills stretching between the fertile rice plains and the sea constitute the only really distinctive feature of Orissa from a botanical point of view, and present not a few of the littoral species characteristic of the Madras sea-coast. The cultivated land which occupies the central alluvial tract has the usual rice-field weeds, while ponds and ditches are filled with floating water weeds or submerged water plants. Near human habitations shrubberies containing various semi-spontaneous shrubs are common. This undergrowth is loaded with a tangled mass of climbing *Naravella*, various *Menispermaceæ*, many *Apocynaceæ*, several species of *Vitis*, a number of *Cucurbitaceæ*, and several *Convolvulaceæ*. The arborescent portion of these village-shrubberies includes the red cotton tree (*Bombax Malabaricum*), *Odina Wodier*, *Tamarindus indica*, *Moringa pterygosperma*, the papal (*Ficus religiosa*),

* For further details of the Geology of Balasore, see Geological Structure of Midnapore, Orissa, etc., Memoirs, Geological Survey of India, Vol. I.

the banyan (*Ficus bengalensis*), the palmyra (*Borassus flabellifer*) and the date palm (*Phoenix sylvestris*). There are no forests, but in the west of the district, where the boundary approaches the hills and the lands are higher, patches of jungle occur, including a little *sāl* (*Shorea robusta*) which rarely attains any size. The usual bamboo is *Bambusa arundinacea*. Open glades are filled with grasses, sometimes of a reedy character; sedges are abundant, and ferns are fairly plentiful.

A century ago, before the land had been so closely cultivated and the canals constructed, the district abounded in wild animals. A traveller who visited Orissa in 1806 found himself in danger of the wild beasts which haunted the jungle from the moment he entered the Province; and between Balasore and Cuttack, in a country which is now thickly populated and closely cultivated, he passed through a dense jungle infested by tigers, and required a guard of sepoy to protect him from the dangers of the journey. Even as late as 1840 elephants were common; tigers and leopards were found all over the district, being especially numerous in the heavy jungle near the coast to the south; while immense herds of wild buffalo were found near the sea, and had become so large and numerous that they did incalculable mischief and were a terror to the country. Since that time cultivation has expanded very greatly, and the wild animals which formerly ranged over the country-side have had to give way before the advance of the plough. There are still however a few survivors of the lords of the jungle. Wild elephants are occasionally met with in the jungle tracts to the west, but these are only stray visitors from the Keonjhar Hills. There are also a few wild buffaloes left; and tigers, though not common, are found along the Dhāmra below Chāndbāli and in the waste tracts to the north-east round Baliāpāl and Bhograi, but the jungle is so dense that they are out of reach of the sportsman's gun. The latter tract is also the haunt of leopards, and black bear are common near Panchpali and Jāmkundā. Wolves do some damage among the cultivators' cattle, and hyæna are found all over the district, wherever there is shelter for them in patches of waste land. In the sandy tracts adjoining the sea there are a number of deer, spotted deer, mouse deer and antelope; and here too there are large herds of wild pig, which do great damage to the cultivators' crops.

The game birds of the district include peacock, jungle fowl, black partridge, red partridge, snipe, golden plover, wild duck, wild geese, and two kinds of quail.

A large variety of fresh-water fish are found in the rivers intersecting the district, and sea-water fish swarm up the tidal rivers.

Seafishing is an important industry which is confined at present to the foreshore. Deep sea fishing is not practised, but the abundance and variety of fish caught on the foreshore indicate the wealth of marine life that may reasonably be looked for in the deep sea. There are no less than seven fishing stations along the coast, the best known being Chandipar, from which Calcutta derives part of its supply. The fishermen are particularly keen in their pursuit of the *hilsa*, and a flotilla of sea-going craft will sometimes drift along together for days, awaiting the approach of a shoal of that fish. When the shoal arrives, they at once fill their boats, steer straight for shore, and convert their haul into *sukhua* or sun-dried fragments of fish—a favourite relish with the Oriyās. Besides the *hilsa*, the most common sea fish are, the *behti* and *telid*, and the delicious *tapai* or mango-fish is found in the tidal waters of the Subarnarekhā and Burābalang.

Fishing in the estuaries is confined to the cold weather, when very large hauls are made. Owing to the distance of the markets from the scene of the fishermen's operations, most of the fish caught is either dried or salted for despatch inland. In the inland rivers the Oriyā spends all his spare time fishing, often standing up to his neck in water for the greater part of the day. The most common fresh-water fish are the *rohi*, *bhākura* and *balid*, which are found in nearly every tank and river, but there are a great number of other species, which form an important article of food in the cultivators' daily diet.

Alligators and crocodiles are found in all the largest rivers, and the mugger or snub-nosed crocodiles are often very destructive.

CLIMATE.

As in other parts of Bengal, the year may be said to be divided into three seasons, the cold weather, the hot weather and the rains. The hot weather commences in March and terminates with the setting in of the rains in June. During this part of the year the heat is tempered by a strong sea breeze from the south-west, which keeps the atmosphere pleasant by day and cool at night. A regular hot wind is rarely felt, and never continues more than 8 or 10 days. The temperature by the sea-side in the hot weather is always several degrees less than at Balasore itself. The south-west monsoon blows steadily from the sea, and even in the months of April and May the morning breeze is so invigorating that a *pankha* can be dispensed with. The coast is, however, almost inaccessible for vessels from the violence of the wind and surf. In April and May the district is occasionally visited by severe thunderstorms which gather in the hills and descend upon the adjacent plains. The rainy season begins in June or early in July, and

the rains last till the end of September or the month of October, when an unpleasant time of moist heat marks their cessation. This season is as disagreeable here as elsewhere, owing to the land winds, which are variable and seldom blow from any quarter long. The cold weather commences at the close of October, after the breaking up of the south-west monsoon. By the beginning of November the air begins to cool, and the mornings and evenings are chilly; but the climate has not the same invigorating and bracing effect as that of Northern India. The atmosphere is generally clear, but rain may be expected for a few days in December and January; and shortly before the beginning of the hot weather in March, there are occasional nor'-westers accompanied by thunder, lightning and rain.

The district is directly on the tract of the cyclonic storms which frequently cross Orissa during the monsoon season, and the extremes of climate are more marked than in other parts of Bengal. In April and May the average maximum temperature is 98° ; while the mean temperature falls from 89° in the hot weather months to 83° in the monsoon season and to 74° in February. The average temperature varies from 47° to 94° during the months of December, January and February; from 62° to 109° in March to May; from 66° to 94° during the rains; and from 56° to 92° in October and November. During recent years the highest temperature recorded was 116° in the month of May, and the lowest 44° in the month of December. Temperature.

Owing to the dry westerly winds which occasionally sweep across the district in the hot season, and to the well marked south-west monsoon conditions which occur later in the year, humidity undergoes considerable variation, ranging on an average from 79 per cent. of saturation in April and May to 89 per cent. in August. Humidity.

The normal annual rainfall is 60 inches, of which 5.1 fall in May, 9 in June, 12 in July, 11.5 in August, 11.2 in September and 5.1 in October. Cyclonic storms occasionally occur in the north of the Bay of Bengal in May, and with these storms weather of the south-west monsoon type prevails. From June to September the monthly rainfall varies from 11 to 12 inches on an average, with considerable fluctuations from year to year, according as the cyclonic storms are more or less numerous and move in the usual course westward over Orissa. In October the rainfall depends on causes similar to those mentioned for May, and is similar amount. Between November and April rainfall is light, and usually caused by local thunderstorms. Rainfall.

Statistics of the rainfall for the various recording stations given below for the cold weather (November to February), the 1

weather (March to May) and the rainy season (June to October), the figures shown being the averages recorded.

STATIONS.	Years recorded.	November to February.	March to May.	June to October.	Annual average.
BALASORE ...	41-42	3-14	9-58	53-93	66-65
AKSHUPADA ...	16-17	2-54	7-84	47-94	58-32
BHADRAKH ...	30-31	3-06	9-13	49-20	61-29
CHANDRALI ...	27-28	3-56	7-40	50-27	61-23
JALESWAN ...	27-28	2-23	6-92	49-07	58-21
SORO ...	27-28	2-25	9-20	47-46	58-91

From March to August the general direction of the wind, according to the matutinal readings, is from the south-west and from September to February from the north-west. During the latter months, however, it veers considerably, and often blows from the north-east. In the hot weather the breeze blows in great strength from the sea after mid-day, and penetrates as far as 8 or 10 miles inland; it is most refreshing in the evenings in the months of April and May, after the excessive heat during the day.

The cyclones which occur in the rains proper (*i.e.*, in June, July, August and September) are generally small in extent; and the chief danger is from the devastating cyclones which occasionally occur in the months which precede and follow the full establishment of the south-west monsoon, *i.e.*, during April and May, October and November. Placed at the north-west corner of the Bay of Bengal, Balasore is exposed to the full brunt of the cyclones which are generated at sea, and, travelling in a north-westerly course up the Bay, burst upon its shores accompanied by irresistible storm-waves. An account of the most notable of these cyclones will be given in Chapter VII.

CHAPTER II.

HISTORY.

In prehistoric times the hills of Orissa* appear to have been peopled by savage tribes differing from those which occupied the lowlands near the sea, while the intervening plains were in the possession of races somewhat more civilized. It is probable that several of the tribes which still inhabit the hilly country to the west were originally natives of Orissa; but the absence of reliable data makes it difficult to separate the later immigrants from the early settlers. According to the traditions current among those tribes, the Khonds of the south, the Gonds of the west, and the Hos, Bhumijes and Santals of the north would appear to have migrated to Orissa in historic times; and the Savars, who still hold a degraded position in Orissa as hewers of wood, have better claims to be regarded as an autochthonous race. They are several times alluded to in the Bhagavati, the oldest sacred literature of the Jains, where their language is referred to as one of the *melechhabhāshās* or barbarous tongues; and they have been identified with the Suari of Pliny and the Sabarai of Ptolemy.

The Juāngs of the Tributary States, who are one of the most primitive races of India, would seem to be another of the early tribes of Orissa. Till they were clothed by order of the Government, the only covering of the females consisted of a few strings of beads round the waist, with a bunch of leaves before and behind—a practice which has given them the name of Patuas or Patrasaras (leaf-wearers) in Orissa; they had no knowledge of the metals till the 19th century, when foreigners came among them; and

* The account of the history of the district up to the time of the Muhammadan invasion has been prepared from an article kindly supplied by Bābu Monmohan Chakravarti, M.A., B.L., M.B.A.S. The account of its subsequent history has been compiled very largely from an article by Mr. John Beames, C.S., which was originally prepared for a District Manual of Balasore and published under the title of "Notes on the History of Orissa" in 1883 in vol. iii of the Journal of the Asiatic Society of Bengal.

Properly speaking, Orissa (Sansk. *Utkala*, vern. *Odish*) means the tract in which the speakers of Oriyā form the dominant people. During the period of British rule the name has been applied to the tract extending from the Chilka Lake to the river Subarnarekhā and comprising the districts of Puri, Cuttack, Balasore, and Angul, besides 17 Tributary States. Unless the context shows otherwise, this will be the meaning of Orissa in this chapter.

no word existed in their own language for iron or any other kind of metal.

The Pāns. The Pāns, who are found scattered throughout Orissa, Singhbhūm, Rānchi, and the adjoining tracts in the Central Provinces and Madras, should also probably be regarded as one of the prehistoric peoples of Orissa. Everywhere they rank among the lowest classes; they are employed in servile occupations even by such tribes as the Khonds and Bhuiyās; and in the days of human sacrifices, the Khonds selected a Pān boy as the best sacrifice which could be offered to mother earth. All these facts seem to indicate that they were the original occupants of the soil, who were dispossessed and reduced to slavery by other tribes.

The Kewats. The sea-coast and the lowlands behind it were presumably occupied by tribes following the occupations of fishermen and boatmen. The Kewats, including the cognate castes, the Gokhās and the Mallāhs, have been traced to very early times as the Kevatas of Asoka's Pillar Edict No. V, and, in the Sanskrit form of the name, as the Kaibarttas.

The intervening plains and uplands appear to have been held by tribes on a somewhat higher level of civilization. From the scanty references made to them in later literature, it would seem that some of these tribes were known as Odras and Utkalas, two tribes, which in course of time, spread southwards, the Utkalas being absorbed in the larger tribe of Odras, though they gave their name to the land in Sanskrit works at least before the 5th century A.D. Gradually, they spread further south to Kālinga, till that land became divided between two main speeches, the Oriyā and the Telugu.

Early Indo-Aryan settlers. It seems probable that before the 3rd century B.C., several of the Indo-Aryan castes, such as the Brāhmanas, Kshattriyas, Karans and others, had migrated to Orissa, which then formed part of Kalinga. In the Baudhāyana Dharma Sūtra it is laid down that the man who has visited Kalinga must offer a sacrifice in penance; in the Mahābhārata pilgrims are asked to avoid Kalinga, and it also says that the Kshattriyas in Kalinga had become outcastes; while a similar statement is made in the Manu-Saṁhitā regarding the Kshattriyas who lived among the Odras. These references appear to point to the migration of several Indo-Aryan castes, and among them there must have been Brāhmanas. The Māstās and the Sāruās are probably the descendants of these early immigrants; they call themselves Brāhmaṇas, and wear the sacred thread, though they neglect the nine *sanskāras* or ceremonies incumbent on Brāhmanas, and have taken to forbidden occupations, such as cultivating with their own hands, selling vegetables, etc.

As Orissa formed part of Kalinga before the conquest of Asoka, its early history is merged in the history of that country. Kalinga extended, according to the Mahabharata, southwards from the junction of the Ganges with the sea, the river Baitarani being specially mentioned as in Kalinga; while, according to Pliny, it stretched as far south as the promontory of Calington, which has been identified with the promontory of Coringa at the mouth of the Godavari. It was an extensive, populous and fairly civilized kingdom. Some idea of the vast number of its population may be gathered from the Rock Edict XIII, which begins with saying that when Asoka conquered Kalinga, 150,000 persons were carried away captive, 100,000 were slain, and many times that number perished. The evidence of the high standard of civilization and prosperity attained in Kalinga is equally striking; elephants were specially bred for the royal forces, of which they formed a prominent part; diamonds of a special kind were quarried and exported; there was an entirely separate measure for medicines; cloth was manufactured and exported in such quantities that Kalinga became the word for cloth in old Tamil; and frequent sea voyages were made to countries outside India, on account of which the Indians came to be called Klings in the Malay Peninsula.

As the result of the bloody-war mentioned above, Orissa and Kalinga were incorporated in the empire of Asoka in the ninth year of his reign, *i.e.*, in 262 or 261 B.C. The horrors which accompanied this war made a deep impression on the heart of the victorious monarch, who recorded on the rocks in imperishable words the sufferings of the vanquished, the remorse of the victor, and his conviction that the only true conquest is that effected by *dharma*, or the law of piety, and not by force of arms. With these edicts Orissa practically emerges for the first time into the light of history. From them we learn that the empire was divided for administrative purposes into several great divisions, with a prince in charge of each; and it was considered necessary to place the extensive and newly-conquered territories of Kalinga under a viceroy stationed at Tosali, which was probably some place near the modern Bhubaneswar in the Puri district.

According to the Purānas, the Mauryan Empire lasted till about 180-170 B. C., and Orissa was therefore under the sway of its kings for 80 to 90 years. During this time it must have come into closer relations with Northern India. Its inaccessibility was to some extent removed by roads lined with banyan and mango groves, with wells and rest-houses, and by the arrangements made for the greater safety of Government messengers and travellers

EARLY
HISTORIC
PERIOD.

Kalinga.

Asoka's
reign.The
Maurya
rule.

These measures naturally facilitated an influx not only of officials but also of traders and pilgrims, some of whom eventually settled in the land. Hence in the Mahābhārata, one finds later verses declaring that there were good men in Kalinga, and, that *tirths* existed in that country, thus withdrawing the ban laid on travelling there. With the Jains Kalinga ranked still higher as an *Ārya* country, and naturally so, for one finds traces of their very early residence in the land in the sandstone hills of Udayagiri and Khandgiri, 5 miles north-west of Bhubaneswar, which are honey-combed with their caves.

Reign of
Khāravela.

Vrihadrath, the last of the Mauryas, was dethroned by his general Pushyamitra, who founded the Sunga dynasty (c. 180-170 B. C.); and his overthrow having brought about the disruption of the empire, Kalinga became independent. This is evident from an inscription at Udayagiri dated 153 B. C., which purports to narrate the career of Khāravela, king of Kalinga. This inscription shows that Khāravela made Kalinga a powerful empire. One of his first acts was to assist the king of the Andhra country, *i. e.*, the tract between the Godavari and the Krishna, in fighting against his suzerain, the Sunga Emperor, Pushyamitra, in 164 B. C. The invasion of Magadha, *i. e.*, South Bihār, later in his reign indicates that the Kalinga king had become not only independent but aggressive. In this war a successful expedition into the heart of the empire led him to the capital, Pataliputra (Patna), on the banks of the Ganges, and compelled the Emperor to sue for peace and acknowledge his independence. The inscription also affords good grounds for the belief that the king and his family had a leaning towards Jainism; and his successors were apparently also adherents of that religion.

The
Andhra
rule.

In the second century A. D. Kalinga appears to have been overshadowed and probably absorbed by the Andhras, to whose active influence the introduction of Buddhism may perhaps be ascribed. The Tibetan chronicles have preserved a tradition that the king of Orisha was converted to Buddhism, with 1,000 of his subjects, by Nagarjuna, who is believed to have flourished, about 200 A. D., at the court of the Andhras; and the conversion of the people would naturally have been facilitated, if Orissa was subject to that powerful dynasty.

MEDIEVAL
PERIOD.

From this time there is a gap of several centuries until the beginning of the seventh century, when we know from an inscription that the country of Kongda to the south of Orissa had been subdued by Sasānka, the powerful king of Gauda. Orissa must also have acknowledged his sway, but shortly afterwards both

countries were conquered by Silāditya Harshavardhana of Kanauj, a devout adherent of Buddhism, who offered the Buddhist monk Jayasena the rental of 80 villages in Orissa, in order to induce him to come from Magadha to his court and overcome the heterodoxy of the priests of Orissa, who decried the Nalanda doctrine as the "sky-flower" system.

It was during his reign that the Chinese traveller, Hiuen Tsiang, visited Orissa (639 A. D.), and we have a short but graphic account of the country in his records. The country, he says, was about 7,000 *li* (a *li* is $\frac{1}{4}$ th to $\frac{1}{3}$ th of a mile) in circuit, the climate was hot, the soil was fertile and produced abundance of grain and fruit. The people were uncivilized, tall of stature and of a yellowish-black complexion. They loved learning and applied themselves to it without intermission. Most of them believed in the law of Buddha; and there were some hundred monasteries with 10,000 priests all studying the Mahāyāna or the Great Vehicle, besides 50 Deva temples frequented by sectaries of all sorts. The capital, which has been identified with Jajpur in the Cuttack district, lay 700 *li* south-west of Tamrālipti (Tamlūk); on the south-west frontier was a miraculous monastery, called Pushpagiri, situated on a great hill; and on the south-east frontier, on the borders of the ocean, lay a great walled port named Charitra.

On the death of Silāditya, his empire was dismembered, and, according to the *Madalā Panji* or palm-leaf chronicles of the temple of Jagannāth, Orissa was under the Kesari or Lion dynasty from the 7th to the 12th century A.D. The very existence of this dynasty is denied by several scholars, but in the *Bhakti-bhagavata Mahākāvya*, a Sanskrit poem of 1409-10 A.D., which gives a very brief history of Orissa, it is distinctly stated that the Kesari kings preceded the Gangas and that Udyota Kesari was one of them; and two inscriptions of the time of Udyota Kesari have been discovered, one in the Nabamuni cave on the Khandgiri hill and the other in the Brahmeswar temple at Bhubaneswar. M. Silvain Lévi, moreover, states that in the Japanese edition of the Chinese Tripitaka is a translation of a part of the Buddhist *Buddhāvataṃsaka Sūtra*, made by a monk in 796-98 A.D. on a copy of the *Sūtra* which was sent as a present to the Emperor of China by the king of U-tcha (Odra), and that this king is named in the letter of presentation as Sri Mahesvar or Parama Mahesvar Mahārāja Subhakara Kesari. Another Kesari king of Orissa, Karna Kesari, is mentioned in the commentary of the historical poem *Rāmapala-Charitam* as having been defeated by Jayasingh, king of Dandabhukti (Bihār): both the poem and the commentary are believed to be by the same author, who was probably a contemporary

The
Kesari
dynasty

of the hero of the poem, Rāmapāla, king of Magadha, who flourished in the latter half of the 11th century.

Medie-
val civili-
zation.

The palm-leaf chronicles attribute most of the great temples at Bhubaneswar to this dynasty, and this, if true, must place it among the important dynasties of India.* The number and magnificence of the remains at Bhubaneswar and elsewhere make it clear that the kings who erected these great works must have held vast and populous dominions and been able to command ample resources. The art of architecture and sculpture must have been well developed to enable such huge and lavishly carved structures to be designed and constructed; the artisans must have received a good training, both mechanically and artistically, before they could have moved and laid in place (without mortar) such gigantic stone blocks, or could have produced the vigorous and often exquisitely carved figures, foliage and arabesque patterns, which lend a charm to the carvings adorning these shrines.

These stately temples show the hold which Hinduism had obtained in Orissa by this time, but a few centuries earlier Hiuen Tsiang found Buddhism flourishing side by side with Hinduism, and his account is corroborated by the presentation of Buddhist scriptures to the Chinese Emperor in the eighth century. The Mahāyāna type of Buddhism, which the Chinese pilgrim found in Orissa, seems to have been supplanted gradually by the Tāntrik forms of the Magadha school, of which traces may be found in the images which are still to be seen in the Assia Hills. The caves at Khandgiri and Udayagiri also bear signs of a Jaina revival, probably a reflex of the Jaina influence in the Western Deccan. Magnificent as are these monuments, not a single literary work of this period has as yet come to light. Buddhist philosophy, however, was not neglected, as otherwise the monks would not have dared to challenge and deery the doctrines taught in the great Nalanda monastery.

The
Eastern
Ganga
dynasty.

In the beginning of the 11th century, the Cholas, who had established a great empire in the Deccan, began to extend their power over Orissa; but their conquests do not appear to have left any permanent mark on the country, being merely brief but successful expeditions. At the end of that century it was effectually subdued by the Eastern Gangas of Kalinganagara (the modern Mulhalingam in the Ganjam district), and the rule of these monarchs lasted till 1434-35, the dynasty including altogether 15 kings. Of these by far the most powerful was Chodaganga, who extended his dominions from the Godāvari to the Ganges, and built the famous temple of Jagannāth at Puri.

The only notable events in the reigns of the succeeding sovereigns are their struggles with the Musalmāns of Bengal, and later on with the Bāhmani and other Sultāns. In 1205 came the first Muhammadan incursion, when Muhammad-i-Shirān, an officer of Bakhtiyār Khilji, burst down upon the country, and this incursion was followed by many others. In an inscription at Chāteswar in Cuttack the founder, a Brāhman minister of Ananga Bhima Deva (1211-38), claims to have fought with Yāvanas, by which he probably means Ghiās-ud-dīn Iwaz, the fourth Bengal Sultān, and with the lord of Tummāna in the Chedi country. The Tabakat-i-Nāsiri records in 1244 first a raid made by the Orissan army, and then a counter-raid of the Bengal king Tughril-i-Tughān Khān, which ended with his defeat by the local levies; in 1245 the Oriyās retaliated by marching northwards under Sāban-tar, who took Lakhnor, besieged Lakhnauti, and only raised the siege on the arrival of reinforcements from Oudh and the Doāb; and between 1247 and 1258 there were three battles between the Oriyās under the same leader and the Muhammadan forces under Malik Ikhtiyār-ud-dīn Yuzbak-i-Tughril Khān of Bengal. In the last of these battles the latter was defeated, but next year he again led his army to the south, and captured and sacked the capital, Umurda. All this fighting took place during the reign of Nara Sinha Deva, who is better known to posterity as the founder of the beautiful temple of Konārak.

The object of most of the raids was to secure the elephants for which Jājnagar, as the Muhammadan chronicles styled Orissa, was famous. The foray of the Bengal governor, Tughril Khān, in 1279 or 1280 resulted in the capture of a great number of these animals; in 1323 Ulugh Khān, the son of the Delhi Sultān, Ghiās-ud-dīn Tughlik, took away 40 of them; and similar results followed the inroads of the Bāhmani Sultān, Firoz, in 1412, and of Hushan-ud-dīn Hoshang, the king of Mālwa, in 1422. The most remarkable of all, however, was the invasion of the Delhi Emperor, Firoz Shāh, in 1360-61. Leaving the baggage behind, the Emperor marched on to Bihār, and then advanced rapidly through the jungles to Orissa. Crossing the Mahānadi, he occupied the royal residence at Cuttack, and spent several days hunting elephants; and when the Oriyā king sent envoys to sue for peace, ironically replied that he had only come to hunt elephants and was surprised that instead of welcoming him, the Rai had taken flight. Finally, the latter sent a present of 20 elephants and agreed to send a certain number annually as tribute, and the Emperor then started on his return journey. It was a disastrous march; the guides lost their way, the army

Muham-
madan
raids.

climbed mountain after mountain without finding any road, and it was not till after 6 months that the exhausted soldiers succeeded in making their way into open country.

The Solar
dynasty.

In the meantime, the Vijayanagara kings rose to power, and Orissa was exposed to attack from the south no less than from the north. On the death of the last Ganga king, his minister, Kapilendra, aided by the nobles and the Bahmani Emperor, Ahmad Shah II, seized the throne and founded the Sūryavansa or Solar dynasty in 1435. He found the fortunes of his kingdom at a very low ebb, but succeeded by constant wars in extending its limits till it stretched from the Ganges to the Pennār. In Bengal Shams-ud-din Ahmad Shah was striving to keep up a tottering throne, and here the Oriyās extended their frontier up to the Ganges. In the south Telingānā was divided among a number of petty chiefs; and Kapilendra overran and annexed the country as far as the Krishnā. South of this river, the last two kings of the first Vijayanagara dynasty, harassed by internal revolt and bloody wars with the Bahmani Sultāns, were struggling to uphold a sinking empire. Taking advantage of their troubles, the Oriyā king annexed the east coast south of the Krishnā as far as Udayagiri near Nellore, and then successfully resisted the attempts of the Bahmani Sultāns to crush him. In 1457 he forced their army to retire from the siege of Davarakonda, and 4 years later, on the death of Humāyūn, ravaged their territories up to Bidar. Energetic as was his foreign policy, he showed no less vigour in his internal administration. One of the earliest measures of his reign was to remit the *chaukidāri* tax paid by Brāhmins and the tax on salt and cowries, to stop the resumption of waste and pasture lands, and to issue orders that all the chiefs in Orissa were to work for the general good on pain of banishment and confiscation of their property.

On the death of Kapilendra in 1470, a civil war ensued, but finally Purusottamadeva overcame his rivals with the help of Muhammad Shāh II, to whom he ceded the southern districts of Kondāpalli and Rājamahendri. His subsequent attempt to recover them led to an invasion by Muhammad Shāh, but the Oriyā king appears ultimately to have regained them, and to have extended his kingdom at least as far as Kondavidu to the south. His son, Pratāparudradeva, ascended the throne in 1497, and had at once to march to the north to repel an invading army sent by the king of Bengal, Alā-ud-dīn, and ten years later he had again to drive out another force which advanced under the Bengal general, Ismail Khān. In the south he was engaged in constant wars with Narasa, the founder of the second Vijayanagara dynasty.

and with his famous son, Krishnarāya, till the struggle ended with the cession of all the territory south of the Krishna by the Oriya king. His kingdom was still further reduced by the loss of the tract between the Krishna and Godāvari in 1522, when Kuli Kutb Shāh, the founder of the Golconda dynasty, invaded Telingāna and drove out the Oriya army. Although, however, the reign of Pratāparudradeva was one of temporal decline, it witnessed a great religious revival, owing to the spread of the Vishnuite doctrines. In 1510 Chaitanya, the great apostle of Vaishnavism, repaired to Orissa and there devoted the rest of his days to the propagation of the faith; he is said to have converted the king and several of his officers, but his preaching was not confined to the court, and the purity of his life and doctrines made a lasting impression on the people generally.

The Solar dynasty did not long survive the death of Pratāparudradeva. The powerful minister, Govinda Bidhyādhara, killed his two sons one after the other, and in 1541-42 seized the throne. The short-lived Bhoi dynasty which he established only lasted till 1560, and the few years it covered were spent in civil war. First Raghubhanja, the nephew of Govinda, revolted, but was soon defeated and driven out of the country by his uncle. On the death of his son, whose unpopular reign ended about 1557, the minister, Mukunda Deva, rebelled, and after killing the two last Bhoi kings and defeating Raghubhanja, who had returned at the head of a Bengal army, secured the throne in 1560.

Mukunda Deva, who was a Telugu by birth, was the last independent Hindu king of Orissa, which at this time was in danger from its powerful neighbours both on the north and south. In 1564 Ibrāhīm the Golconda king was eager for aggrandizement, and in Bengal Sulaimān Karānī was equally anxious to extend his dominions by annexing Orissa. In 1564-65 Mukunda Deva concluded a treaty with the Emperor Akbar, which was intended as a counterpoise to the ambition of the Afghāns in Bengal, but this measure did not long help the Oriya king. In 1567 Ibrāhīm, who had invaded Rājamahendri unsuccessfully three years previously, conquered the country as far north as Chicacole; and next year Sulaimān Karānī, finding Akbar fully occupied by wars in the west, attacked Mukunda Deva, when he had marched to the banks of the Ganges, and forced him to take refuge in the frontier fort of Kotsamā. He then detached a part of his force under his Afghān general, Illāhābād Kalā Paṭhār, who quickly marched southwards through Mayūrbhanj, defeated the king's deputy, and ravaged Orissa. At this juncture some of the Oriya chiefs raised the standard of revolt, and he was killed by Mukunda

Deva hurried south to save his kingdom, but was defeated and slain by the rebel forces, whose leader was in his turn killed by the Muhammadan invaders. Raghubhanja escaped from the prison in which he had been confined by Mukunda Deva and attempted to secure the empty throne, but after some four months desultory fighting, his death left the Afghans masters of Orissa (1568 A. D.).

General
condition
of the
country.

Of the internal state of the country during these five centuries of Hindu sovereignty, we have unfortunately very little record. Both Buddhism and Jainism were neglected by the Ganga and the Solar kings, and, if the palm-leaf records can be believed, the followers of those religions were persecuted by the former line. The Gangas did not, however, neglect the older Saiva worship; and, though they did not build any temples themselves, their rich gifts to the shrines at Bhubaneswar shew that they were the royal patrons of Saivism. At the same time, they seem to have been catholic in their religious tastes, as the great Vaishnavite fane of Jagannath at Puri and the massive sun-temple of Konarak were built under their orders; and the Sūryavansa kings followed in their footsteps, liberally endowing the Puri temple.

The land was a land of plenty, producing abundance of grain and fruit, but in spite of this plenty, the people were occasionally exposed to the horrors of famine. The palm-leaf chronicles mention one such famine in the reign of Kapilendradeva when the price of a *bharan* of paddy rose to 105 *kāhāns* of cowries, while in the reign of Pratāparudradeva it was once as high as 125 *kāhāns*. Except in times of distress, provisions were exceedingly cheap, cowrie-shells were the only medium of exchange among the people generally, and there was no demand for a gold or silver currency.

The northern part of Balasore from the Kānsbāns to the frontier of Bengal appears to have still been in an undeveloped state. Though Central and Southern Orissa are full of the great stone buildings erected by its kings, there is a noticeable absence in the north of any forts, temples, palaces or bridges which can be traced to a period earlier than the 16th century. To that time must be attributed the strong chain of forts at Raibania in the extreme northern corner of the district, just opposite the place where the old Pathān road crosses the Subarnarekhā. This road, which runs parallel to the Trunk Road but nearer the hills, and which is left uncultivated by the peasants apparently from superstitious motives, was made or used at about the same time by the Afghans during their expeditions to Cuttack. Further evidence of the undeveloped state of the north of the district is afforded by the fact that tenures granted for the purpose of clearing and settling forest land

THE
MUHAM-
MADAN
PERIOD.

and go back to Oriyā at its end; but though the vocabulary borrows freely from Bengali, the language is Oriyā in its essence.

Oriyā is encumbered with the drawback of an excessively awkward and cumbrous written character. This character is, in its basis, the same as Devanāgarī, but is written by the local scribes with a stylus on a talipot palm-leaf. These scratches are, in themselves, legible, but in order to make them more plain, ink is rubbed over the surface of leaf and fills up the furrows which form the letters. The palm-leaf is excessively fragile, and any scratch in the direction of the grain tends to make it split. As a line of writing on the long, narrow leaf is necessarily in the direction of the grain, this peculiarity prohibits the use of the straight top line, or *mātrā*, which is a distinguishing characteristic of the Devanāgarī character. For this the Orissa scribe is compelled to substitute a series of curves, which almost surround each letter. It requires remarkably good eyes to read an Oriyā printed book, for the exigencies of the printing press compel the type to be small, and the greater part of each letter is this curve, which is the same in nearly all, while the real soul of the character, by which one is distinguished from another, is hidden in the centre, and is so minute, that it is often difficult to see. At first glance, an Oriyā book seems to be all curves, and it takes a second look to notice that there is something inside each.

Oriyā literature* is of comparatively recent growth, none of the existing works, so far as can be ascertained, going back beyond the 16th century A. D. It consists exclusively of verse, and as is natural with a conservative people like the Oriyās, the earliest works extant are religious, viz., a few songs and certain paraphrases of the Sanskrit Purānas and epics. No work is so much venerated as the *Bhāgavata* of Jagannātha Dāsa; and next in estimation come the *Ramayana* of Balarāma Dāsa, the *Bhārata* of Śarolā Dāsa and the *Hariṇāṁsa* of Achyutananda Dāsa. All these were composed in the first half of the 16th century A. D.; to which period may probably be referred popular songs like the *Kesabakoili* or cuckoo-song about Krishna. Profane literature appeared later, and at first dealt only with mythological stories. Among the oldest of these is the poem *Rasa-kallola* by Dīnākrishna Dāsa. This poem describes the early career of Krishna, and is a

* I am in

Babu Manmohan Chakravarti, M.A., B.L., M.E.S.S., for the

...a poet is ... who, following Dinakrishna Dāsa, flourished in the beginning of the 18th century. One of the royal family of Gumsur, a petty hill State in the north-west of Ganjam district, he was driven to take refuge in Orissa in the course of a civil war, and there devoted his life to Oriyā literature. Of his voluminous compositions, forty-two are at present known, the bulk of them consisting of poems with love-stories as their theme. He was apparently the first Oriyā poet to free himself from the trammels of exclusively religious and mythological influences. His poems labour under the defects of obscenity and obscurity, but contain some fine rhetoric. In the latter respect his only rival is Abhimanyu Sāmanta Singhar, who died in 1806, the author of *Bidagdha-Chintāmani*, which explains in lucid lines the abstruse doctrines of Vaiṣṇavite *Bhakti* and *Prema*. During the British period Oriyā poetry has shown no progress. It is represented by a few doggerel compositions and some small pieces of verse, among which a collection of short poems by Rai Rādhā Nath Rai Bahādur, late Inspector of Schools, Orissa, deserves notice. Prose is, however, being carefully studied and has a promising future.

RELI-
GIONS.

Hindus
and
Muham-
madans.

The great majority of the people are Hindus, who, with an aggregate of 1,033,166 persons, account for 96·4 per cent. of the population. The Muhammadans number only 28,340 or 2·6 per cent. of the population; while 0·8 per cent. are Animists drawn from the aboriginal races. It is somewhat strange at first sight that the Musalmāns are not more numerous considering the strong footing they once had in Orissa. The Muhammadans effectually conquered the Province and took possession of it in 1568 A. D.; and subsequently in Akbar's reign, when the Afghan kingdom of Bengal was overthrown by the Mughals, the Afghans migrated in large numbers into Orissa and there held large fiefs and independent power. When they again rose in revolt, they were signally defeated, and in order to deprive them of the means of political combination, Shujait Khān distributed them among the villages in the interior, but allowed them grants of lands sufficient to maintain their dignity. Orissa long remained a dependency of the Mughal Empire, and the Afghans continued in possession of their *jāgirs*, but with the lapse of centuries they dwindled in numbers and in influence.

The Muhammadan conquest was not only logically which but it failed to attain that permanence and

Vaisya and the other of the Dhobā caste. His descendants by the former are known as Daina, and those by the latter as Bayān. The females of the former class wind their *sari* from the left, and those of the latter from the right side of the waist.

Golas.

The Golas, who number 34,500, are a low caste, which is more numerous in Balasore than elsewhere. It is divided into four sub-castes, viz., (1) the Gandiā, who live by cultivation, chiefly of onions and garlic, and by the manufacture of gunny-bags; (2) the Bengali, who are prohibited from growing onions and garlic and from making gunny-bags, and are usually cultivators or petty traders; (3) the Tulābhina, or cotton carders; and (4) the Thorīā, or traders in grain, which they carry on pack-bullocks, whence their name. The gradual introduction of railways and roads is causing many Thorīās to take to cultivation as a means of livelihood.

Kandras.

The Kandras, who number 32,000, are a distinctive Oriyā caste, ranking very low in the social scale. They are usually day-labourers or village *chaukidars*, the latter being considered the traditional caste occupation. Their women folk serve as coolies, and collect and sell shells, feathers, firewood, etc. The name is said to be derived from their skill in archery (*kānda* meaning arrow), and in former times they and the Pāns formed the rank and file of the local militia. They are also known as Digruṛk.

Gokhas.

The Gokhas, with a strength of 30,700, are more numerous in this district than in other parts of Orissa. They are a fisher caste, and their name is said to be derived from *go* water and *khāya* living. They may use only bamboo fishing contrivances, called *shaluā*, and are forbidden to fish with nets. Some have abandoned their traditional occupation and taken to cultivation, while others serve as *pālki*-bearers, whence they are called *kāduabehārā* or "mud bearers" to distinguish them from the regular *pālki*-bearers of the Gaura caste. They are a very low caste whose touch defiles, and they rank far below the Kewats, who also live by fishing.

Karans.

The Karans, who number 25,600, are the only other caste with a strength of over 25,000. They are the writer-caste of Orissa, but there are many among them who are zamindars, tenure-holders or ryots. These Karans, who are also called Mahāntis, are one of the most intelligent and influential classes in Orissa. One curious custom of theirs may be mentioned. Young girls are carefully trained by their mother's in artificial weeping, and when they go to their husband's house, weep aloud and take leave of every member of the family by singing in plaintive tones the songs they learnt before their marriage.

In conclusion, mention may be made of a small caste peculiar to Balasore, the Dagrās, who are found chiefly in

ones take round for sale with their milk. Field labour of all kinds is eschewed by the Gaura women. The sub-caste known as Magadha ranks last and is probably a recent accretion from some aboriginal tribe.

The next most numerous caste is that of the Pāns (60,000), who seem to have been originally one of the aboriginal tribes. The social status of the caste is very low; they eat pork and fowls, drink wine, and repudiate the Hindu restrictions upon food. Their original occupation is said to be weaving, but they now mostly work as day-labourers, drummers and cane-weavers; many of them have taken to cultivation, and the village *chaukidars*, *paiks* and postal runners are largely recruited from their ranks. Their professed religion is a sort of bastard Hinduism, which inclines to Vaishnavism, each group of Pāns having their Pān Vaishnava who officiates as their priest. The veneer of Hinduism, however, has only recently been laid on, and beneath it may be perceived plentiful traces of the primitive Animism common to Dravidian tribes.

The only other castes numbering over 50,000 are the Tāntis (56,000) and Telis (50,170). The Tāntis or weaver caste are of some interest, as having been instrumental in laying the foundation of the fortunes of the English in this district; for it was the delicate fabrics turned out from their looms that maintained the early European factories. The muslins and cloths woven by them were exported in large quantities to Europe; but the introduction of machinery has not only killed the export trade, but has flooded the country with cheap piece-goods and seriously crippled the local weaving industry. Many of the weavers have consequently given up their hereditary occupation, and have taken to agriculture and labour. The caste is divided into several sub-castes, two of which, the Aswini and Gaurā, Tāntis, are said to have come from Bengal in order to learn the secret of weaving the fine cloth for which Balasore was once famous. Another subdivision, the Mātias, whose main occupation is the cultivation of the soil (*māti*) is said to be of aboriginal descent; while the Sankhuās are so-called because their caste occupation is blowing conch-shells (*sankha*) at weddings and other ceremonies.

The Telis call for only a brief mention. They are the oilmen of the country, but many of them are traders; they are also known as Kuberputras or sons of Kuber, the god of wealth.

The Rājus, who number 47,000 souls, are mainly engaged in agriculture, but a few are money-lenders and zamindars. They trace their origin to a certain Rājā of Orissa, Chauranga Deb, who died at Jaleswar fell in love with two girls, one of

upanayana or assumption of the sacred thread. The Utkal Brāhmins observe most rigidly the limits of age laid down in the Śāstras for the marriage of girls, giving them in marriage usually before ten and seldom after twelve, unlike the other high castes, the Kahattriyas, Karans and Khandaits, whose daughters are rarely married before twelve and are sometimes kept unmarried up to what is regarded as an advanced age even among educated reformers.

The Utkal Brāhmins have *gotras* indicative of descent from old *rishis*, like the other Brāhmins of Northern India. The *gotra* groups are all exogamous, and some of them have been further broken up by titles indicating descent from more recent ancestors. Below this again there are still more subdivisions leading to a system of hypergamy, which, however, is far less marked in Orissa than in Bengal. In this connection, mention may be made of the remarkable fact that among the Utkal Brāhmins traces are found of the existence of the totemistic beliefs common among the Dravidian races. A Brāhmin of the Atrēya *gotra* for instance will not sit on the skin of the deer or eat its flesh. A Brāhmin of the Kaundinya *gotra* similarly does not sit on the skin of a tiger, and a Brāhmin of the Gautama *gotra* offers special *pājā* to the cow on the occasion of marriage. The usage is explained not by any direct descent from the animals revered, but by the legend that the *gotra rishis* who were invited to the *jajna* of Dakṣa fled in the disguise of animals, when the *jajna* was broken up by Siva. This is no doubt a fiction invented to explain an aboriginal belief, which the Brāhmins apparently imbibed from the Dravidians with whom they came in contact. There is, however, no evidence that there was any actual infusion of Dravidian blood among the pure Aryans who were imported from Kanauj.

Gauras.

The Gauras, who in Balasore number 7,000, are the great pastoral caste of Orissa, corresponding to the Goālās in Bengal and Bihār. They nearly all possess cattle and are chiefly engaged in breeding cows and in selling milk, curd and *ghi*; about 25 per cent. are also engaged in agriculture, and some serve as *mulyās* or hired agricultural labourers. They also work as domestic servants and very largely follow the profession of *pālki*-bearers. There are several sub-castes, of which the Mathurāpurī ranks highest in Balasore, because its members do not carry the *pālki*. The Gopapurī sub-caste is noticeable for the fact that its female members are almost the only women in Orissa who do not wear nose ornaments—a circumstance which, they pretend, connects them with Krishna's mythical milkmaids. The young women of both sub-castes prepare the butter and *gāi* which the elder

the latter, though colonies of Dakshinotriya Brahmins have crossed the boundary, since the cleavage and settled in the northern region. Throughout Orissa, Brahmins taboo wine, but those who worship the goddess Kali are permitted to drink it, and the temple of the great goddess Birajā at Jāipur probably became a centre for the spread of this objectionable habit. This seems to be the only feasible explanation of the legend that the water of the sacred Baitarani became wine and that the Jāipur Brahmins degraded themselves by drinking it; and it is noticeable that the southern Brahmins give this as a reason for considering the northern Brahmins inferior to themselves.

It must have been increasingly difficult for a growing community to keep strictly within the limits of the religious duties, prescribed by the Śāstras; and a further split was, therefore, caused between those in the enjoyment of royal patronage who continued to observe them, and those whom necessity forced to depart from them. Each territorial subdivision has thus been divided into two groups called Śrotriya or Vaidik and Asrotriya or non-Vaidik. The former includes the Śāsani Brahmins, who depend, for their subsistence, chiefly on royal grants of rent-free lands, and the latter includes the following classes:—(1) Sārūā or Paniāri, growers and sellers of vegetables; (2) Pandā, Pūjāri or Deulā, professional temple worshippers or cooks; and (3) Marhia, priests of low castes, who receive alms from the humble clients whom they serve and enjoy the privilege of being fed first in all feasts connected with *prāyaschitta* or purification ceremonies. The Śrotriyas do not intermarry with the Asrotriyas, and the latter have no intercourse with the degraded Māstāns or Mahastāns of the pre-Buddhistic period. The non-Brahmanical occupations and titles of the latter mark them out as a class quite distinct from the rest of the Brahmins of Orissa; they are called Balarāmgotri, apparently from the fact that the plough is believed to be the distinctive weapon of the god Balarām.

The Utkal Brahmins were originally all Śāktas, but now they all keep the *saṅgrām* and worship the four gods Vishnu, Śiva, Ganesh and Śūrya, and the goddess Durgā. Chaitanya converted some of the Brahmins to Vaishnavism, but even these converts worship the four gods and the goddess mentioned above on ceremonial occasions. The Grām Devatī receives the same degree of homage from this caste as she does from the other castes in Orissa. The ten *sanskāra* or purifying ceremonies are a distinctive feature in the life of the Utkal Brahmin. According to the Śāstras, they should be performed at different periods of life; but in Orissa all the ceremonies are performed at the time of

and file of the old feudal militia, while the former, who hold large *jāgir* tenures, may represent the officers of that body; an almost impassable gulf seems to exist between these two sub-castes, and there is nothing common between the two, except the name itself. On the other hand, cases of intermarriage between the Khandaits and members of other castes of equal standing are not at all rare. Karans, a fairly high caste of Aryan descent, are often found marrying members of Mahānsaik Khandait families, and intermarriage between the Chāsas, who have an admixture of aboriginal blood, and the ordinary Khandaits is quite a common occurrence.

Brāhmins.

The Brāhmins, are, next to the Khandaits, the most numerous caste in Balasore, numbering nearly 120,000 persons. They belong to the Utkal class of Brāhmins, which is one of the five great territorial groups, into which the Gaura Brāhmins of Northern India are divided. Antiquarian research has not yet been able to fix the time when this division took place, but it may perhaps be assumed that the colonies of Aryan Brāhmins were separated by local usage, and that this separation was marked by geographical lines. Before the wave of Buddhism passed over the Utkal country.

Deprived the Brāhmins of their priestly functions and to more worldly pursuits for their subsistence. Most of them turned to agriculture, while a few are believed to have taken up residence in the temple of Jagānnāth. In the 5th century the ruling dynasty revived the Brahmanical faith in Orissa, and assigned the priestly functions to the degraded Brāhmins, while the Vedas, had become cultivators and cooks, but by the 10th century 10 Brāhmins of pure faith, fit to perform Vedic rites, were appointed to the greatest stronghold of Hinduism in Northern India. It is related that these Brāhmins performed 10 great

"horse-flesh sacrifices" (*Aśvamedha Yajna*), on the bank of the sacred Baitarani near the town of Jāipur; and a flight of steps, called Dasāsvamedha Ghāt, yet marks the spot near which the sacrifices were performed. These imported Brāhmins gradually spread over the whole of Orissa and the colonies which they formed with the aid of royal grants of rent-free lands are still known as *Sāsans*.

In course of time, however, the process which caused the original division of the Gaura Brāhmins into five groups was repeated and two endogamous subdivisions were formed on the two sides of the river Brahmani, the northern subdivision being called Jāipurōtriya and the southern Dakshinōtriya. Jāipur or Biraja Kshetra is the centre of the former and still contains the largest proportion of Brāhmins in Cuttack district. Puri is the centre of the latter.

current which thus set in, and he eventually invented more refined forms of worshipping the same malevolent spirit. The aboriginal mode of village worship seems thus to have preceded the Paurāṇik rites of Śakti worship, although the present names of the goddesses are apparently of later date.

There are 11 castes with a numerical strength of over 25,000 each, which account for altogether 740,000 persons or about three-fourths of the entire population. These are the Khandaits, Brāhmanas, Gauras, Pāns, Tāntis, Telis, Rājās, Golās, Kandrās, Gokhās, and Karans. A brief account of each of these castes is given below.

The Khandaits are by far the largest caste in the district, numbering, according to the census returns of 1901, over 210,000 or more than a fifth of the entire population. There is some difference of opinion as to the origin of the word Khandait. The general view is that it means swordsman (from *khandā* a sword), but another explanation, which has been put forward, and with much plausibility, is that Orissa was formerly divided into *khandas*, or groups of villages corresponding to the *pargana* of Muhammadan times, and that there was over each a man called *khandapati*, which was subsequently corrupted to *Khandait*. Whatever may be the etymology of the name, it is admitted that the Khandaits are the descendants of those who formed the peasant militia under the ancient Rājās. The armies of these chieftains consisted of various races, the upper ranks being officered by men of high descent, while the lower ranks were recruited from all alike of the hills and plains. As members of the Khandaits had to serve as soldiers in time of war, they were given lands to hold under a strictly military tenure. Their characteristic occupation and the consequent relation with land tended to alienate them from the communities to which they had originally belonged, and eventually led, on the establishment of a well-defined caste system, to the formation of the Khandait caste.

The variety of types which the Khandaits exhibit and their free intercourse with some other castes tend to show that they cannot trace their descent from a single origin and that the caste is only a heterogeneous group, which is perhaps made up at the one end of Aryan immigrants and at the other of recruits from a number of indigenous non-Aryan tribes. They are divided into two sub-castes—(i) the Mahānaik Khandaits and (ii) the ordinary Khandaits. The latter, who occupy the rank of ordinary cultivators, appear to correspond to the rank

The people have a peculiar means of knowing the wishes and decrees of the goddess. In almost every village there is a male or female medium, called Kālaśi, through whom the goddess communicates with the people. The presentation of a befel-nut is the token of engaging the Kālaśi, whose services are specially in demand on the occasion of an outbreak of cholera. Before the time appointed for the Mārjana, he takes a purifying bath, puts on a new cloth, and paints his forehead with vermillion. Then holding two canes in his hands, he appears before the Grām Devatī, and with dishevelled hair swings his body to and fro. After a time he begins to tremble, and in the course of his confused mutterings gives out some secrets of the village to win the confidence of the people. He then predicts evil to some and good to others; prescribing at the same time the remedies required, which take the shape of offerings to the goddess and special favours to himself. While going through these antics, the Kālaśi is sometimes offered a fowl, the blood of which he drinks after pulling off the head.

Certain village goddesses are regarded as "Parama Vaishnavis" or devoted followers of Vishnu, and animal sacrifices are not allowed before them. Probably owing to the spread of Vaishnavism, such sacrifice are only made sparingly before the other goddesses; but in the Mahāstāmī *pūjā* and other special *pūjās* offered in fulfilment of vows, animals are generally sacrificed. Fowls are also let loose before some of the goddesses by the upper classes of Hindus and are killed and eaten by the lower classes.

It seems hardly open to question that this worship of malevolent spirits, through the medium of shapeless stones, is an offshoot of the fetishism of the aborigines. The fact that all Hindus from the highest to the lowest make the Grām Devatī the object of their adoration shows how the beliefs of the whole Hindu community have been permeated by this fetishism. It still includes, though to a restricted extent, the sacrifice of animals, which is one of the most characteristic features of aboriginal worship; and the offering of fowls which are so rigorously excluded from the houses of the upper classes of Hindus, can hardly be said to be anything else than an aboriginal practice. The restriction of the priestly function to the Sūdra castes is another link in the chain of circumstances which indicate the aboriginal origin of this form of worship. While the Brāhman stood aloof, the mass of the people, leavened in their lower strata by the aborigines, adopted the faith which, by its easy explanation of the origin of evil, appealed most strongly to their simple minds. The Brāhman could not, however, long stand against the popular

met with, and occasionally the trunk of some tree supposed to possess supernatural properties is smeared with vermilion and worshipped as the village goddess. Besides the generic name Grām Devatī, each goddess has a separate specific name which is commonly one of the thousand names of the goddess Kālī. The general idea seems to be that she is like a mischievous old witch; and earthen figures of horses, elephants and other animals are placed before her by the superstitious rustics, as it is believed that she wanders about at night.

The most noticeable feature of the Grām Devatī worship is the non-priestly caste of the men who conduct it, the Bhandāri, Mālī, Rāul or Bhopā being usually the priest. They hold small rent-free grants called "*māfi Grām Devatī*," i.e., lands which were left unassessed for her worship at the time of the first regular settlement, and they also receive daily doles from the rich men of the village and weekly doles from the poorer peasants: the latter are given on Thursday, commonly regarded as Lakṣmī day, or the day of the goddess of fortune, which is considered a specially auspicious day for the regular *pūjā* of the Grām Devatī. The first essential in this worship is a bath which keeps the Thākuraṇī cool and well disposed towards the village. The bath includes smearing with *ghī* and turmeric; when it is completed, a paint of vermilion is put on, and after the toilet is over, a light oblation (*bhog*) of fruit and sweetmeats is offered. The daily *pūjā* including both bath and *bhog*, costs about an anna, and if this small daily expenditure cannot be met, the priest contents himself by pouring a little water over the goddess, though sometimes even this inexpensive offering is dispensed with. The worship of the Grām Devatī is conducted with great pomp and ceremony on the Mahāstami or second day of the Durgā Pūjā; and special offerings of sweetmeats and fruit are made on all festive occasions.

The Thākuraṇī, who is supposed to possess more powers for doing or averting mischief than for doing positive good, receives special attention on the outbreak of any epidemic disease. Within her own village she is believed not to commit any mischief; and epidemics are supposed to be the work of neighbouring goddesses, whom the tutelary village goddess expels by persuasion or superior force, if she is duly propitiated. The occurrence of a single case of cholera in the village is the signal for "*Thākuraṇī Mārjanā*" or washing of the Thākuraṇī. The villagers immediately raise the necessary funds by subscription, and propitiate the goddess by a cooling bath and refreshing offerings, the ceremony being repeated, if the epidemic does not cease.

The Roman Catholic Mission is a comparatively small one. Its work is carried on chiefly in the town of Balasore, where there is a large chapel and a small Roman Catholic population. There is a priest attached to the Mission and four nuns, who have the management of an orphanage for native girls.

Hindu
sects.

Vaishnavism is predominant among the people, and the causes of this predominance are not far to seek. The existence of the temple of Jagannāth, who is regarded as an incarnation of Vishnu, has exerted a powerful influence on the popular faith; and besides this, the famous reformer Chaitanya passed an important part of his life in these parts, and made a lasting impression upon the popular mind by the purity of his life and teachings. Vaishnavism is still struggling to divert the popular mind from the number of gross animistic accretions by which the religion of the mass of the population is encumbered; and it is Vaishnavism which mainly distinguishes the semi-Hinduized aborigines in the plains of Orissa from their Animistic brethren in the hills, though its adoption is often merely nominal and its high ethical principles do not shape the moral conduct of the people. Genuine Oriyās belonging to sects other than that of the Vaishnavas are very few in number.

Religious
life.

The religion of the people exhibits very clearly the blending of Hinduism with Animism, and the process of assimilation appears to be illustrated by the common legend of Jagannāth.* Here we find the aboriginal people worshipping a blue stone in the depths of the jungle, until the deity grows tired of the jungle offerings of the primitive people and longs for the cooked food of the more civilized Aryan race. When the Aryan element at length comes on the scene, the rude blue stone disappears and gives place to a carved image. At the present time this twofold worship co-exists throughout Orissa. The common people have their shapeless stone or block which they adore with simple rites in the open air; while side by side with it is a temple to one of the Aryan gods with its carved image and elaborate rites. Every village pays homage to the Grām Devatī† or Thakurānī, as these stones and stocks are called, and reverence her as the tutelary goddess of their small community.

The goddess is commonly represented by a piece of shapeless stone, smeared with vermillion and surrounded by several smaller pieces of stone, also vermillion-daubed and shapeless, which represent her children. Carved images are sometimes, though rarely,

* See Sir W. W. Hunter's Orissa, Vol. i, pp. 88-

† For a full account see Note on the Grām

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at the tutelary village deity
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obtained in Bengal. It was a conquest rather than a colonization, and the Mughals and Afghans made few converts to Islām, though they were tolerant, at least in the later period of their rule, to Hindu institutions. Thus the emperor Shāh. Jahān made a grant of the lands of *pargana* - Shāhjahānābād for the maintenance of a bridge over the Kānsbān for the convenience of pilgrims going to Puri; it was reserved for the Hindu Marāthās to resume this pious grant which benefited all races and creeds. The Musalmān element is comparatively small, and mostly limited to a few centres, such as Balasore, Bhadrakh and Dhām-nagar. Such Muhammadans as there are are generally the descendants of the invaders, not as in other parts of Bengal, converts from Hinduism. They have retained the mother-tongue of their ancestors, and have not adopted the language of the people among whom they dwell. One family at least, the Garhpadā Bhuiyās, the offspring of a converted Brahman zamindār, though it shows tenderness for some Hindu traditions (*e.g.*, the females will not eat beef) has deserted its native Oriyā for the Urdu of its present co-religionists. A similar aversion to beef exists among the members of the old Mian family of Bhadrakh who are of Pathān or Afghān descent, as a result of their long residence among a Hindu community.

At the census of 1901 it was found that there were altogether 1,274 Christians in the district, of whom 1,110 were natives. There are two Christian missions at work, the American Free Baptist Mission and a Roman Catholic Mission. The former Mission started work in Balasore in 1832, and has stations at Chāndbali, Bhadrakh, Mitrāpāra, Jaleswar and Santipur; it also maintains 3 orphanages and conducts medical work on a large scale. The work done by it is of a general character, evangelistic, educational and industrial. The first is carried on under missionary supervision by a large number of native evangelists, who visit the various markets and bazars and make tour regularly through the villages in the interior. The educational work of the Mission is carried on chiefly in Balasore town, where it maintains a High school, an English school for European boys and girls, 5 Kindergarten Lower Primary schools and a Middle English school. At the other stations within the district there are 2 Middle English schools and one Middle Vernacular school, as well as 31 Lower Primary schools and one Kindergarten school. The industrial work includes farming, weaving and carpentry. A station for experimenting in farming and gardening, which Government has recently established in Balasore, has also been entrusted to the control of the Mission.

and Dhāmnaḡar thānaa. The term means "a messenger," and it is said that the Dagrās were postal runners either during Muhammadan rule or under the Marāthās, when they acquired considerable *jāgrs*, known as Arajī Dagrāi, which are still in existence. Most of them are cultivators, but in Bhadrakh some are hereditary holders of proprietary tenures, the grant of which dates from Marāthā rule, when one of the caste rose to be the local governor of Bhadrakh. According to some they were brought from Nāgpur by the Marāthās; others allege that they are connected with the Dagrās of Upper India. They bear the same titles as Chāasa, and it may therefore be surmised that they are a functional offshoot from that caste.

CHAPTER IV.

PUBLIC HEALTH.

VITAL
STATIS-
TICS.

A COMPARISON of vital statistics for any lengthy periods is rendered impossible by the changes in the system of registering births and deaths which have taken place from time to time. In 1869 the duty of reporting deaths was imposed on the village *chaukidars*, and in 1876 the system was extended to births; but the returns received were so incomplete that they were soon discontinued and, except in towns, deaths alone were registered until 1892, when the collection of statistics of births as well as of deaths was ordered, and the system now in vogue was introduced.

So far as they can be accepted--and they are sufficiently accurate for the purpose of calculating the approximate growth of the population and of showing the relative healthiness or unhealthiness of different years--the returns submitted since that year show that, on the whole, conditions have been favourable to the growth of the population. There have been repeated outbreaks of cholera, causing considerable mortality; but the number of deaths reported has exceeded the births only in three years, viz., in 1892, 1894 and 1896, when there were severe epidemics; and in the nine years 1892-1900, taken together, the births outnumbered the deaths by about 30,000. During the last 5 years (1901-05) the growth of the population has been sustained, the excess of births over deaths amounting to 24,000. On the other hand, this quinquennium witnessed a falling off in the birth-rate as compared with the previous 5 years, the ratio of births declining from 40 to 39 per mille; while the death-rate rose from 31 to 34 per mille. The result is that of the three sea-board districts of the Pissa Division, Balasore showed the least advance in the second half of the decade ending in 1905. While the birth-rate rose in Cuttack and was practically stationary in Orissa, it fell in Balasore; and in that district too there was the greatest relative rise in the death-rate in the quinquennium, though it is the healthiest of the three districts.

The mortality among infants is exceptionally high, and in this respect Balasore has for several years past had a very bad record; the returns of 1905 show that not less than 27.7 per cent.

of every 100 children born died during the first year of their life, a percentage higher than in any other Bengal district except Shahabad. This high death-rate among infants may be ascribed to the operation of one or more of several causes, such as the poverty and consequent poor vitality of the majority of the parents; disregard of the primary rules of sanitation in the lying-in rooms, which are generally dark, damp and ill-ventilated out-houses; want of skilled midwives; insufficient nourishment, especially when the mother is sickly; insufficient clothing, combined with neglect and exposure; ignorance and neglect in the treatment of infantile diseases; and the immaturity of parents, leading to feeble organization in the children and enhancing the natural susceptibility to disease.

The climate is on the whole good, except in the north, where malarial fevers of a malignant type have spread from the adjacent tracts of Midnapore, and in the south-east corner of the district, at the mouth of the Dhamra, an unhealthy locality where low malarial fevers are prevalent. The highest birth-rate in recent years was recorded in 1899, when it was 46 per mille, and the lowest (31.7 per mille) in 1892. In the latter year the death-rate reached the highest percentage yet returned (43.6 per mille), but fell in 1893 to the lowest on record, viz., 25.9 per thousand of the population.

According to the returns submitted year by year, by far the greatest mortality is due to fever, but the ignorant *chaukidar* responsible for the returns is far from being a medical expert. Drawn as he often is from the lowest dregs of the people, he can diagnose only a few well-known diseases like cholera and small pox, and many others are indiscriminately classed under the general head of fever. It is noticeable, however, that in Balasore the mortality ascribed to fever is exceptionally low. Since the present system of returns of vital statistics was introduced, the death-rate caused by fever has never been as high as 15 per mille; it has been known to fall as low as 11.4 per mille; and the average for the 10 years ending in 1905 has only been 13.3 per thousand of the population.

The fevers most prevalent are due to malarial affections, the commonest form being intermittent fever of a malarial type. Generally speaking, fever continues throughout the year, but the cold weather from October to March is the period of greatest intensity; practically all parts of the district are affected, but the Jaleswar thana is the worst fever zone. Many parts of the district are low-lying, swampy and water-logged; and the houses, which are generally mud huts constructed from earth dug out of a hole in the immediate

PRINCIPAL
DISEASE

Fever.

vicinity, are surrounded by unhealthy stagnant pools, which furnish breeding places for the anopheles mosquito. Great difficulty is experienced in inducing the Oriya to take quinine as a prophylactic, owing to his inherent prejudice against its use; but in 1904 and 1905 the free distribution of pice-packets to the poor met with some measure of success in the interior, where malaria was most prevalent. The town of Balasore has perhaps a greater immunity from fever than any other part of the district; and here steps have recently been taken to destroy mosquitoes as an experimental measure by a "mosquito brigade" working under the supervision of the Civil Surgeon; about 80 houses and compounds were cleared by the brigade in 1905, and the result was, on the whole, satisfactory.

Before steamer communication with other parts of Bengal had been established and before the construction of the railway, cholera annually made its appearance along the Trunk Road together with the great stream of pilgrims travelling to Puri. It was ranked first among the scourges of epidemic disease, and the mortality caused by it was appalling. In 1853 it is said that it worked its way from village to village, till there was not a single hamlet that escaped it, and very few in which the mortality fell short of 10 or 12 per cent. The whole district was panic-stricken, and the villagers fled from their houses, leaving behind the dead and dying. Another terrible visitation occurred in the famine year of 1866, the severity of which may be gauged by the fact that 88 out of 100 prisoners in the jail were attacked and 35 died.

After steam communication between Orissa and Calcutta had to a large extent cleared the Trunk Road of pilgrims, the epidemics of cholera diminished, but in 1888 it was reported that the average mortality was about 5 per mille, reaching the excessive figure of 13·7 per mille in 1889. During the decade ending in 1900 there were again frequent epidemics, the worst outbreak being in 1892, when the disease was responsible for a mortality of 15 per 1,000, a rate which was exceeded during the decade only in a terrible epidemic in Purnea in 1900. Since the latter year cholera has been an annual visitation, the average death-rate during the 5 years ending in 1905 being 4 per mille, but there have been none of the terrible outbreaks which were formerly common. It usually makes its appearance immediately before and after the rains; and there can be little doubt that its prevalence is due to a bad and scanty water-supply. In many parts of the district the people have to undertake journeys of three or four miles in order to secure potable water; and it seems an unquestionable fact that the majority at least of the peasants drink all their lives from wells and tanks charged with organic impurities.

In common with the inhabitants of other parts of Orissa, the people of Balasore suffer greatly from diarrhoea and dysentery, but the number of deaths attributed to these affections has steadily decreased since the present system of reporting births and deaths was introduced in 1892. In the 5 years ending in 1896 the average annual death-rate was 3·6 per mille, in the next quinquennium it was 2·4 per mille, and in the 4 years ending in 1905 it fell to 1·8 per thousand of the population. The prevalence of diarrhoea and dysentery in Orissa has recently been made the subject of a special enquiry, the object being to ascertain whether their prevalence was as great as would appear from the high death-rate persistently returned or whether it was due to error on the part of reporting agency. The conclusions arrived at are that the high reported death-rate does more or less represent the state of affairs, and that diarrhoea and dysentery, particularly the former, are a frequent cause of death in this part of the country, their greatest incidence being in February and March. Dysentery is fairly common, but does not cause so many deaths as acute diarrhoea. The death-rate is, however, undoubtedly increased by the fact that typical and lingering cases of cholera are reported as diarrhoea. Infantile diarrhoea is extraordinarily common, and is the chief cause of the high death-rate, the returns of cases among children under 5 years of age being nearly equal to all those among persons over that age. Generally speaking, the cause of these diseases is the bad water-supply, the eating of new rice as soon as it is reaped, and the general ignorance of the people.

Orissa has long had an unenviable reputation for the prevalence of small-pox, which breaks out in epidemic form nearly every year. These outbreaks are largely due to an ancient prejudice against vaccination and to the widespread practice of inoculation, which spreads small-pox among the unprotected. In Balasore, as in the other districts of the Division, the disease is an annual visitation, but the number of deaths due to it is far less than in either Puri or Cuttack. There were somewhat severe outbreaks in 1901 and 1902, causing a total mortality of 3,500, but since then there have been no serious epidemics, and in the 4 years ending in 1905 it accounted for an average mortality of only 650 per annum. This satisfactory result is due to the fact that vaccination is steadily acquiring popularity among the conservative Oriyās.

Elephantiasis is common, but is not nearly so prevalent as has sometimes been represented. Thus, in the last Settlement Report (1900) it is stated that it is the most common of endemic disease and that nearly 3¹/₂ per cent. of the population suffer from it; while in Hunter's Statistical Account of Bengal (1877) it is

said that elephantiasis attacks about 25 per cent. of the people and is always present in from 15 to 20 per cent. Regarding this statement, the following remarks of a former Civil Surgeon of Balasore may be quoted. After pointing out that this percentage would mean that one in every four or five persons in the district is subject to the disease, he remarks—"This, I believe, to be very far from the facts. In a household of from 20 to 30 domestics, one servant may be found with the complaint. In a jail of 80 to 100 prisoners, two or three may be found suffering from it. In gatherings in the streets and fairs I have never noticed so high a percentage as one in four or five of the people. I am of opinion that 7 per cent. would still be a high figure. That males suffer more from the disease than females is correct, and that it has a strong hereditary leaning is equally undoubted. One feature peculiar to the disease here is that the scrotum is seldom the seat of the disease, and rarely indeed do we see the large scrotal tumors seen elsewhere."

Hydrocele and syphilis are also common, but are not nearly so common as would appear from the Statistical Account of Bengal, where it is said that 20 per cent. of the people labour under hydrocele, and that as many as 40 per cent. of the population are victims to syphilis. The latter is an excessively high estimate; and though venereal diseases are certainly common, as will be apparent from the table at the end of this chapter, it is doubtful whether Balasore is worse than other parts of Bengal in this respect. A maximum of 10 per cent. would be a more reasonable estimate; and in the case of hydrocele, 7 per cent., though still high, would be nearer the mark. Cutaneous diseases are general among the rice-eating Oriyās; ague and rheumatic affections, with cold and catarrh, are also very prevalent.

Orissa stands high among the localities in which leprosy is prevalent, and the proportion of male lepers in Balasore (187 per 100,000) is greater than in any other district in the Division; the percentage among females (53 per 100,000) is much lower. Insanity is comparatively rare, and the proportion of lunatics (24 per 100,000 males and 13 per 100,000 females) is far below the average for the whole Province. Blindness is also much less frequent than in either Cuttack or Puri, and in the census of 1901 it was found that the percentage of blind persons was only 45 per 100,000 males and 44 per 100,000 females; the corresponding figures for the whole of Bengal were 95 and 85 respectively.

Organized and systematic schemes of sanitation are practically unknown outside the town of Balasore. Here a great advance has been made during the last 30 years. In 1877, Sir William Hunter remarked—"Till lately no attempt was made at sanitation.

Infirmi-
ties.

SANITA-
TION.

Balasore town contains no fewer than 11,000 tanks, not one of which can be said to be in a wholesome state. The tanks are the receptacle of every sort of filth, fluid and solid. The one object of the Oriya's life is ceremonial purity, which he reconciles in a surprising degree with foul drinking-water and putrid dirt-heaps at his door." Since that time the sanitation of the town has been greatly improved in spite of the limited means of the municipality. Tanks have been cleared out, drains opened, and conservancy rules rigidly enforced. The drainage of the town is good, all surplus water finding a ready exit, and these natural facilities have been aided by the introduction of an extensive system of drains and by the removal of the old drains which terminated in cess-pools.

In the interior the state of affairs is very different. Wells have been sunk and tanks cleaned, but there has been no serious attempt to improve the conditions prevailing in the mofussil villages, while the apathy of the people and the unwholesome habits to which they are rooted render the task of village sanitation on any appreciable scale most difficult. Few villages have a pure and regular water-supply, and they all abound in filthy pits and hollows containing water of the foulest character and full of decaying vegetation which constitutes a standing menace to public health. The houses throughout the district are built of mud dug up from the vicinity; and the result is that in the neighbourhood of almost every hut or house there is a dirty pit, filled to overflowing with water in the rainy season, and the receptacle of every description of filth.

Vaccination is unpopular among all classes in Orissa, where the people are more conservative, less enlightened and more wedded to superstitious beliefs than in the neighbouring Province of Bengal. Inoculation has, on the other hand, been practised for ages past, and the people believe in it. They see that its effects are serious, and they think that the powers of the goddess of small-pox are manifested by the eruption; while, as its substitute is not followed by an eruption or, as a rule, by fever, they distrust its powers of protection.

The profession of inoculator is hereditary among the Mastān Brāhmans, who are found in scattered villages all over Orissa. Their working season is usually a short one, extending from about November to March. The material used is small-pox derived from a person recovering from an attack of variola discreta and removed on or about the 21st day of the disease. After removal, the wound is covered up with cotton-wool and

which is closed with a sola pith and this should be, if possible, with

VACCINATION.

The practice of inoculation.

or 4 days after removal—the cotton-wool containing the crust is moistened with water and squeezed on to a snail-shell; and the turbid fluid thus obtained is used for the operation. The instrument employed is a small piece of iron, shaped like a miniature country nail-parer, with a sharp edge; with this the skin is notched until blood just appears in the scratch, and the watery fluid mentioned above is then applied. Formerly male children were generally inoculated on the forearm, and female children on the upper arm; but the Pāns, the hereditary inoculators, of some of the Tributary States, select a spot on the forehead between the eyebrows as the seat of inoculation. Recently, however, owing to the prohibition of the practice, it has been found necessary to select some less conspicuous place, such as the back of the arm, knee or hand. Although there is no restriction regarding the age at which the operation may be performed, it usually takes place between the age of two and eight years, and in practice persons over 40 years of age are not subjected to it.

The operation is practically a religious ceremony. The day before it takes place a solemn offering is made to Sitalā, the goddess of small-pox, of which the essentials are coco-nuts, milk, treacle, curd, cheese, plantains, turmeric, rice, *daba* grass, plum leaves and vermillion. This *pūjā* having been completed, the child is inoculated, and incantations are made to Sitalā until the sores fall off. Four or five days after the operation the inoculator visits the child and takes his fees, and he comes again and offers *pūjā* to Sitalā from the 9th to the 16th day, during the height of the eruption. Formerly this *pūjā* was performed openly with cornets and drums; but nowadays it takes place privately for fear of attracting attention.

After the operation the child is fed on cold rice and *feni* (a kind of sweetmeat), and has a bath daily until the eruption appears. The bath is then stopped, and rice, *dāl* and fried plantains form the dietary. During the period of convalescence the patient is humoured, dealt gently with, and never scolded, even if fractious, as it is believed that the deity presiding over small-pox is in the child's system, and any castigation or abuse might offend the goddess and draw down her wrath upon the child, in the form of confluent small-pox and death. It is also believed that the inoculators have the power of producing the exact number of eruptions which they promise before undertaking the operation; and they are credited with the power of allaying the intensity of the disease in small-pox stricken patient. Their treatment consists in the administration of emetics and purgatives, and they believe the poison is washed away.

The danger of this practice in spreading small-pox scarcely needs illustration, but for many years past it has not been so prevalent in Balasore as in Cuttack and Puri, and it is gradually dying out. Vaccination has made steady progress among the people in spite of the fact that it is only compulsory in the Balasore Municipality, and the prejudice against it is disappearing. In 1905-06 altogether 30,600 persons were successfully vaccinated, representing 29.1 per thousand of the population, and protection was afforded to 242.6 per mille of the infant population. In the preceding 5 years the average annual number of persons successfully vaccinated was 37,360 or 35.56 per mille, as compared with the ratio of 33.2 for the whole of Orissa and of 31.1 for the entire Province.

Thirty years ago there were only 2 dispensaries in the district, the Pilgrim Hospital and Dispensary at Balasore and a branch dispensary at Bhadrakh, and the total number of persons treated at them was only 4,000. The number of dispensaries, excluding the Police Hospital at Balasore, which is intended only for members of the police force, has now risen to 11, of which 4 have accommodation for in-patients. During the 5 years 1890-1894 (when there were only 8 dispensaries) the average annual number of persons treated was 21,000, but it was more than doubled in the quinquennium ending in 1904, when it amounted to over 43,000 per annum of whom 700 were in-patients. During the same period the daily average number of in-patients increased from 20 to over 23, the cost of diet of each patient being 2 annas per diem; while the daily number of out-patients rose from 118 to 205 and the average annual income from Rs. 11,000 to Rs. 18,000. Statistics for 1905 will be found in the tables at the end of this chapter.

The principal medical institution in the district is the Pilgrim Hospital at Balasore, which was established in 1853 with the object of affording medical relief to the pilgrims passing along the Trunk Road to Puri. Pilgrims formerly constituted the great majority of the patients, but since the establishment of through railway communication with Puri, their numbers have greatly fallen off and the hospital is little used by them. This hospital has accommodation for 39 (33 males and 6 females) indoor patients, and an annual average of 6,000 patients are treated. A new hospital, called the Central Hospital, is now under construction, which it is hoped will meet a long-felt want. The main buildings have been completed and have been in use since November 1905; including the beds in the Pilgrim Hospital, it contains 42 beds for male and 6 beds for female patients. The town also contains 2 dispensaries affording outdoor relief only, viz., Raja Shyamā-

MEDICAL
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TIONS.